

COMPARATIVE STUDY OF PLANTS GENERATION OF ARCTIUM LEAVES

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The Arctium generation numbers twelve species but there are only three species in Ukraine. This is *Arctium lappa*, *Arctium tomentosum* and *Arctium minor*. *Arctium lappa* is the most widespread species in Ukraine. The plants of these species are very similar by morphological features, that's why raw materials of *Arctium tomentosum* and *Arctium minor* are often produced by the name of *Arctium lappa* leaves. Therefore, studying qualitative composition and quantitative content of some groups of biological active substances was actual in different species of *Arctium* leaves.

The aim of the work is comparative studying of *Arctium lappa*, *Arctium tomentosum* and *Arctium minor* leaves.

Research techniques. The leaves of plants *Arctium* species were prepared in the area of Vinnitsa in May-June 2014. We used test-tube reactions and chromatography on the paper and thin layer of sorbent for preliminary research of qualitative composition of the raw material. The quantitative content of organic acids, ascorbic acid and sum of oxidative phenols, hydroxycinnamic acids and phlavonoids was studied by titration method and spectrophotometry.

Results. *Arctium lappa*, *Arctium tomentosum* and *Arctium minor* leaves contained sugars (positive reaction with the Feling's reagent), free and fixed amino acids (positive reaction with 0.2% spirit solution ningidrin before and after hydrolysis). We identified apple, lemon, oxalic and chlorogenic acids, kempherol and astragalin. The quantitative content of some groups of biological active substances in different species of *Arctium* leaves distinguished insignificantly and made at least 0.75% of sum organic acids, 21mg% of ascorbinic acid, 5% of sum oxidative phenols, 1.5% of sum hydroxycinnamic acids and 1.5% of phlavonoids.

Conclusions. As the result of studying of *Arctium lappa*, *Arctium tomentosum* and *Arctium minor* leaves sugars, amino acids, organic acids, phenolic acids and phlavonoids in raw materials were detected. Besides, the quantitative content of organic acids, ascorbic acid and sum of oxidative phenols, hydroxycinnamic acids and phlavonoids were determined. The obtained data shows that the *Arctium lappa*, *Arctium tomentosum* and *Arctium minor* leaves have similar qualitative composition and quantitative content and they may be used for saving medicinal plant raw material "Leaves *Arctium*" which may widen saving base of raw material.